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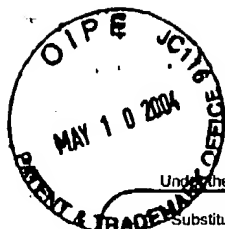
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 3

### Complete if Known

Application Number	09/539,966
Filing Date	March 31, 2000
First Named Inventor	Stephen D. Macarthur
Art Unit	2182
Examiner Name	Mike Nguyen
Attorney Docket Number	EMC2-044PUS

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
MN		US- 4,780,808	10/25/1988	Moreno et al.	
		US- 5,274,645	12/28/1993	Idleman et al.	
		US- 5,386,511	01/31/1995	Murata et al.	
		US- 5,551,048	08/27/1996	Steely, Jr.	
		US- 5,586,264	12/17/1996	Belknap et al.	
		US- 5,603,058	02/11/1997	Belknap et al.	
		US- 5,745,790	04/28/1998	Oskouy	
		US- 5,787,265	07/28/1998	Leshem	
		US- 5,903,911	05/11/1999	Gaskins	
		US- 5,920,893	07/06/1999	Nakayama et al.	
		US- 5,948,062	09/07/1999	Tzelnic et al.	
		US- 5,949,982	09/07/1999	Frankeny et al.	
		US- 6,055,603	04/25/2000	Ofer et al.	
		US- 6,205,536	03/20/2001	Yoshida	
		US- 6,240,335	05/29/2001	Wehrung et al.	
		US- 6,338,095	01/08/2002	Yasuda et al.	
		US- 6,304,903	10/16/2001	Ward	
		US- 6,418,496	07/09/2002	Pawlowski et al.	
MN		US- 6,438,586	08/20/2002	Hass et al.	

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### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
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MN		EP 0510821	10/28/1992			
		EP 0795812	09/17/1997			
		JP 8172446	07/02/1996			
		JP 07244634 (Abstract Only)	09/19/1995			
MN		JP 07244634	09/19/1995			

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*Mike Nguyen*

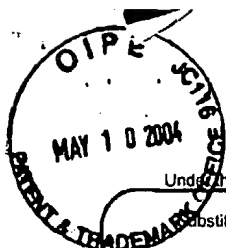
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		Number-Kind Code <sup>2</sup> (if known)			
MN		US- 6,529,521	03/04/2003	MacArthur	
		US- 6,557,140	04/29/2003	Kakuta et al.	
		US- 6,651,130	11/18/2003	Thibault	
		US- 4,636,946	01/13/1987	Hartung et al.	
		US- 5,115,433	05/19/1992	Baran et al.	
		US- 6,275,953	08/14/2001	Vahalia et al.	
		US- 6,470,389	10/22/2002	Chung et al.	
MN		US- 6,563,793	05/13/2003	Golden et al.	
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
MN		JP 7191930	07/28/1995			X
MN		JP 6337836	12/06/1994			

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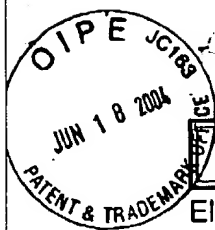
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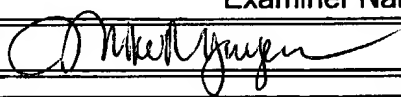
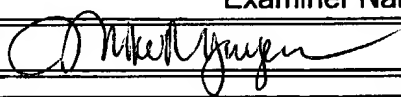
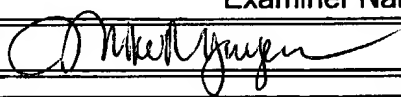
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## ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18  
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Title of Invention	DATA STORAGE SYSYEM HAVING SEPARATE DATA TRANSFER SECTION AND MESSAGE NETWORK WITH PLURAL DIRECTORS AND COMMION PRINTED CIRCUIT BOARDS																										
<p>Application Number: 09/539966 </p> <p>Confirmation Number: 2142</p> <p>First Named Applicant: Stephen MacArthur</p> <p>Attorney Docket Number: EMC2-044PUS</p> <p>Art Unit: 2182</p> <p>Examiner: Mike Nguyen</p> <p>Search string: ( 4977556 ).pn.</p> <p>US Patent Documents</p> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1"><thead><tr><th>init</th><th>Cite.No.</th><th>Patent No.</th><th>Date</th><th>Patentee</th><th>Kind</th><th>Class</th><th>Subclass</th></tr></thead><tbody><tr><td>mm</td><td>1</td><td>4977556</td><td>1990-12-11</td><td>Noguchi</td><td></td><td>370</td><td>60</td></tr></tbody></table> <p>Signature</p> <table border="1"><thead><tr><th>Examiner Name</th><th>Date</th></tr></thead><tbody><tr><td></td><td>8/19/04</td></tr></tbody></table>								init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass	mm	1	4977556	1990-12-11	Noguchi		370	60	Examiner Name	Date		8/19/04
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Electronic Version v18  
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Title of  
Invention

DATA STORAGE SYSTEM HAVING SEPARATE DATA  
TRANSFER SECTION AND MESSAGE NETWORK WITH  
PLURAL DIRECTIONS ON A COMMON PRINTED CIRCUIT  
BOARD

Application Number: 09/539966  
Confirmation Number: 2142  
First Named Applicant: Stephen MacArthur  
Attorney Docket Number: EMC2-044PUS  
Art Unit: 2182  
Examiner: Mike Nguyen  
Search string: ( 4476526 or 4633387 or 6038641 ).pn.



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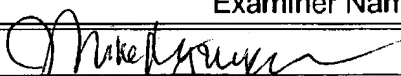
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### US Patent Documents

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init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
MW	1	4476526	1984-10-09	Dodd		364	200
MW	2	4633387	1986-12-30	Hartung		364	200
MW	3	6038641	2000-03-14	Zangenehpour		711	119

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Examiner Name	Date
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